

Ubr7 (N-20): sc-165853

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). Ubr7 (ubiquitin protein ligase E3 component n-recognin 7), also known as C14orf130 or N-recognin-7, is a 425 amino acid protein that contains one UBR-type zinc finger and one PHD zinc finger. Participating in protein modification events within the N-end rule pathway, Ubr7 functions as an E3 ubiquitin-protein ligase that recognizes and binds proteins that contain destabilizing N-terminal residues, thereby leading to their ubiquitination and subsequent degradation.

REFERENCES

1. Aasland, R., et al. 1995. The PHD finger: implications for chromatin-mediated transcriptional regulation. *Trends Biochem. Sci.* 20: 56-59.
2. Varshavsky, A. 1996. The N-end rule: functions, mysteries, uses. *Proc. Natl. Acad. Sci. USA* 93: 12142-12149.
3. Xie, Y., et al. 1999. The E2-E3 interaction in the N-end rule pathway: the RING-H2 finger of E3 is required for the synthesis of multiubiquitin chain. *EMBO J.* 18: 6832-6844.
4. Tasaki, T., et al. 2005. A family of mammalian E3 ubiquitin ligases that contain the UBR box motif and recognize N-degrons. *Mol. Cell. Biol.* 25: 7120-7136.
5. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. *Cell* 125: 801-814.
6. Tasaki, T., et al. 2007. Biochemical and genetic studies of UBR3, a ubiquitin ligase with a function in olfactory and other sensory systems. *J. Biol. Chem.* 282: 18510-18520.
7. Lee, M.J., et al. 2008. Synthetic heterovalent inhibitors targeting recognition E3 components of the N-end rule pathway. *Proc. Natl. Acad. Sci. USA* 105: 100-105.

CHROMOSOMAL LOCATION

Genetic locus: UBR7 (human) mapping to 14q32.12; Ubr7 (mouse) mapping to 12 E.

SOURCE

Ubr7 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Ubr7 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-165853 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ubr7 (N-20) is recommended for detection of Ubr7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Ubr family members.

Ubr7 (N-20) is also recommended for detection of Ubr7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Ubr7 siRNA (h): sc-92200, Ubr7 siRNA (m): sc-154876, Ubr7 shRNA Plasmid (h): sc-92200-SH, Ubr7 shRNA Plasmid (m): sc-154876-SH, Ubr7 shRNA (h) Lentiviral Particles: sc-92200-V and Ubr7 shRNA (m) Lentiviral Particles: sc-154876-V.

Molecular Weight (predicted) of Ubr7: 48 kDa.

Molecular Weight (observed) of Ubr7: 55 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.